Our mother earth is unique because of the presence of life. Life evolves through evolution; this evolutionary process culminates in the formation of human being. The creation of human being as a supreme noblest work of the universe blessed with creativity, dynamism and intellectual capacity. The supremacy of man over others is due to his ability for the acquisition of knowledge, creation of knowledge and even for the storing and transformation of knowledge. In other words life of man evolves through knowledge and knowledge evolves through education. We are indebted to education for our modernity, power, privileges and prosperities. Thus appropriate education to the child is now considered as a birth right.

Carl Rogers (1967) states that significant learning is more than accumulation of facts, which makes difference in the individuals behaviour, in the course of action he chooses in the future, in his attitude and personality. Jack Mezzirow (1983) learning is "the means by which pupil come to perceive, interpret, criticize and transform the worlds in which they live".

Motivation is the process of responding to pupils' inner needs and drives. While individuals will have needs that are particular and specific, they will also have needs in common with all other learners. Within the classroom setting, five sets of needs have of special importance. These are a sense of belonging, a sense of achievement, a sense of appreciation, a sense of influence and a sense of involvement.

Motivation for academic achievement is attributed to behaviour which leads to learning and achievement (Masaali 2007). The bulk of behaviours indicating the academic motivation involve insisting on doing difficult assignments, hard working or effort into learning to reach mastery and choosing assignments which need great effort (Abedi 2008). The psychologists have recognized and examined the effective factors in motivation for academic achievement. The results of their research indicated that personality; family and social variables are related to this construct. Some other psychologists directed their studies towards integrating intellectual ability, learning style, personality and motivation for academic achievement as the predictors of academic achievement in higher education (Hama Kera 2009).

Achievement motivation plays a decisive role in the organization of human behaviour. It is a psychological construct which determines the achievement level of an individual. Achievement motivation is also called need for achievement (n-achievement). It was McClelland (1953), who initiated research in the field of Achievement Motivation and develops means of measuring achievement using Thematic Apperception Test. People with

whom the need for achievement is strong seek to become accomplished and to improve their task performance. They are task oriented, challenging, evaluating and comparing it other peoples performance or in terms of some other standard. One would expect achievement motivation to be an important predictor of success.

Experts, parents and teachers have been interested in discovering the important forces influencing students' achievement in academics. Most people believe that motivation plays a significant role in determining the students' achievements. Each student has different level of motivation as well as different personal and social factors that affect his motivation. It is imperative for educators and parents to understand the interaction of the various aspects contributing to student's motivation in order to ensure the academic success of school children.

Achievement motivation is a construct originated from motivation, which has traditionally been used to describe and explain difference in intensity and direction of behavior. Lewin (1935) highlighted the importance of n- achievement in human behaviour. He studied 'upward striving' nature of achievement, aspiration and behaviours.

The concept of Achievement motivation was first systematically studied by McClelland (1953) and his associates. The concept of achievement motivation actually originated from Murray (1938). Murray has listed twenty common needs. Out of the different needs listed the focus of interest was social needs like need for affiliation, power and achievement. McClelland started research of human motivation by selecting the 'need to achieve' which Murray has listed. Murray's 'effect need' and 'model need' are also related to the need for achievement.

All individuals possess some degree of achievement motivation that induces them to achieve more and more in life. Different individuals have different degrees of achievement motive. In any society we can find individuals who set high standards for themselves, work very hard to achieve them and respond with considerable feeling to their success or failure in meeting those standards. There are another group of individuals who set very low standards, make little or no effort, have little concern about their accomplishments and remain indifferent. An achievement oriented person selects an easy or intermediate task to begin with and choose tasks of progressively greater difficulty whenever they experience success.

Achievement motivation has its roots in early childhood. Child care practices, socio-cultural and economic conditions of family, parental expectations about their children, the conditions in which a particular groups live and culture of the society influence in developing

a person's motive to achieve. Man's social origin and culture also affect the extent to which one acquires an achievement motive.

Self-esteem and self-concept are other factors facilitating the need for achievement. Some psychological factors like anxiety, level of aspiration and curiosity affect in developing one's own achievement motivation. Ohja (1973) in a study observed that mother's love, father's permissiveness and love were positively related to n-achievement whereas parental restriction and protection were negatively related to n- achievement. Achievement motive develops more in the family where independent development of the child is emphasized. Low achievement motivation is associated with families in which children are more dependent on their parents. He also found that sons of entrepreneur fathers, boys from nuclear families and sons of younger mothers had higher n- achievement than those sons of bureaucrat fathers, boys from joint families and sons of middle aged and older mothers respectively.Men and women differ indegrees and type of achievement motivation as the expectations of the two sexes differ culture to culture and society to society.

The present study is to find out the effect of select correlates of achievement motivation on academic achievement in Biology among Higher secondary students. Various studies show the factors which has a definite influence upon the formation of a learner who have an orientation towards better academic achievement. The correlates of achievement motivation identified for the present study are the Study habits, Examination anxiety, Self-concept and Home environment of the learner.

Study habits refer to the activities carried out by a learner during the learning process for the purpose of improved learning. This has three components, concerning the what, when and why of the study habits. First the study habits are the behaviour that the learner produces. Second they occur at the time of learning. Third they are intended as aids to learning. Study habits are intended to elicit and guide one's cognitive process during learning. Lavasani, Weisani and Ejei (2011), indicates that achievement goals affect statistics anxiety more often through academic motivation and learning strategies. A self-directed learner processes appropriate study strategies and uses them at the appropriate times and places during learning. Study habits play a vital role in the achievement of children. Higher learning outcome of every child is the result of excellent study habits.

Examination anxiety is a kind of state anxiety and happens only when one is in a specific situation requiring performance and evaluation. Kuyper, et al. (2000), in a longitudinal study in Dutch secondary school found that achievement motivation and fear of failure are prominent predictors of mean achievement. There are three types of test anxious

students, students in the first category lack the study skills to adequately prepare for the tests and therefore lack the knowledge to perform well on tests. Students in the second category have the study skills necessary to prepare for the test but have a fear of failure that makes them unable to perform successfully in test situations. Students in the third category believes that they have the study skills, but they do not; as a result student in this category do not adequately prepare for the test and the poor preparation for the test leads to anxiety. Thus examination anxiety has become of particular concern to teachers, students and even to parents.

The self-concept refers to the collection of ideas, attitudes and beliefs about ourselves that inhabit self-awareness at any moment. In other words it is about the kind of person we see ourselves as being. In addition to ideas and thoughts about who we are, we also have feelings about our perceived identity.

A strong and positive self-concept is conducive to healthy growth and development and necessary for effective relationships are to be established. A poor, negative self-concept can generate feelings of insecurity and a general sense of unworthiness. Litalien, et al. (2010) in a longitudinal study found that autonomous academic motivation mediates the relation between academic self-concept and academic achievement.

Self-concept is considered as an important parameter in the field of education and it is a means to understand a person and to enhance his or her potentialities to perform better in all areas of activity including learning.

The study of the effects of home environment on school learning has captured the attention of the developmental psychologists. Sociologists are more likely to be interested in socio cultural variables. Psychologists are more interested in fine grained analysis of behaviour within the home environment. Both approaches are obviously important and their combination is leading to a more detailed picture of the rich variety of ways in which the home environment can influence children's performance at School.

The home environment influences learning differently according to the child's age. The variables affecting a six or seven year olds learning do not necessarily operate in the same manner after the student has been in school for several more years. Moreover the home environment may change markedly over this period. Ahamad and Nigam (2009) found that favourable and unfavourable home environment affects academic achievement motivation of higher secondary students. By studying the academic progress in conjunction with the rest of the children's development; have yielded a better portrayal of the complex ways in which

children may benefit; are impeded in their school learning by different types of home environment.

NEED AND SIGNIFICANCE OF THE STUDY

Alvin Toffler (1981) suggests that in the later stages of the twentieth century we are witnessing the emergence of a third great wave of change. The first wave took us from the dawn of civilization to the renaissance and was characterized by social patterns based on agricultural economics. In the second wave we saw these social and economic patterns change as industrialization created new structures. Now we see the decline in industry and manufacturing. We witness the beginning of the third great wave of change that is more complex and characterized by communication revolutions, rapid political change, ecological disasters and technological developments.

The changes are taking place in thick and fast. Adjustment and adoption to these changes, especially in the globalized competitive world is a difficult proposition for students, those in their adolescent stages of development. The higher secondary stages of education coincide with this particular period of development. This is the stage where the students have to make certain decisions about their future related to higher education, and career selection. Thus this stage is a turning point in the life of a higher secondary student.

Education is the one and the only means, which helps the younger generation to reach their desired destination of progress and prosperity. This may involves a lot of hurdles and obstacles. They have to overcome these with vigour and enthusiasm. They may show consistency, persistence and perseverance in their efforts. We may call these efforts as academic pursuits for academic achievement. In this era of Information Communication Technology every student has equal opportunities. But the question is how effectively and smartly one utilizes these opportunities, it may depend upon the sociological and psychological environments and experiences in their life.

An individual'sefforts for academic attainments are always under the influence of these Psycho-social components. We may call these components as motivational factors for academic achievements. The success and failure in the life of an individual to a certain extent depends on his success and failure in academic attainments. The momentum to academic accomplishments which in turn to life accomplishments related to the motivational circumstance, the motivational components the individual interacts. The higher secondary school students has a dream about their future. The moulding of their dream into vision and the vision into reality is possible only through education. For realizing their vision into reality, help and support from parents, teachers and the general public is necessary. As the

investigator is a teacher educator, he is more concerned about the involvement of teachers, parents and learner in the academic well-being of the learner at the higher secondary level.

In this context the investigator decided to study the effect of these correlates of achievement motivation on achievement in Biology of higher secondary school students.

STATEMENT OF THE PROBLEM

The present study is entitled as:

EFFECT OF SELECT CORRELATES OF ACHIEVEMENT MOTIVATION ON ACADEMIC ACHIEVEMENT IN BIOLOGY AMONG THE STUDENTS AT HIGHER SECONDARY LEVEL

DEFINITION OF KEY TERMS

The key terms used in the study have been defined to attain greater precision and clarity. The operational definitions of such items are given below.

Correlates of Achievement motivation

Achievement motivation is a psychological trait, consist of a combination of factors which initiates, directs and sustain behaviour towards the successful attainment of certain goals. The goal provides some sort of satisfaction significant and relief to the student. Correlates of achievement motivation mean those variables having relation with achievement motivation. For the present study four variables which have close relation with achievement motivation, were selected as correlates of achievement motivation, they are Examination Anxiety, Study habit, Self-concept and Home learning environment.

i) Examination Anxiety

A psychological condition in which a person experiences distress before or during or after an examination to such an extent, that anxiety affects performance or interferes in the normal learning. For the present study, Examination anxiety means the total score obtained by the student on the Examination anxiety scale.

ii) Study habits

The learning strategies and styles practiced and adopted by the learner for the effective execution of his academic activities. For the present study Study habits means the total score obtained by the student on the Study habits inventory.

iii) Self-concept

Self-concept here means academic self-concept of the leaner. Self-concept is one's self-identity which consists of an organized collection of beliefs and feelings about one self. The academic self-concept which influences the student to process information about the

social world around him along with the information about himself like his motives, emotional status abilities and self-evaluation. For the present study Self-concept means, the total score obtained by the student in the Academic Self-Concept Scale.

iv) Home learning environment

It is the ambience in the home for effective learning. This may involves the objective physical environment in which the child lives to the subjective psychological environment created by the parents. For the present study Home learning environment means the total score obtained by the student in the Home learning environment inventory.

Academic achievement in Biology

Academic achievement is the acquisition of principles and generalizations and the capacity to perform efficiently. It can be evaluated in terms of the level of information knowledge and understanding of the learner. According to Good (1982) achievement refers to the standard performance of the students in the group under consideration for a test developed to measure curricular outcomes. For the present study Academic achievement in Biology is the total score obtained by the student on the achievement test in Biology.

Higher Secondary students

Students studying in the +1 and +2 classes under the higher Secondary Directorate of Kerala Government.

OBJECTIVES OF THE STUDY

1. To find out the level of the select correlates of achievement motivation and achievement in Biology among the higher secondary schoolstudents for the total sample and for the relevant sub samples.
2. To find out the relationship between the select correlates of achievement motivation and achievement in Biology among the higher secondary schoolstudents for the total sample and for the relevant sub samples.
3. To find out the effect of the select correlates of achievement motivation on achievement in Biology among the higher secondary school students.

HYPOTHESES OF THE STUDY

1. There is no significant difference in the level of the correlates of achievement motivation and the level of achievement in Biology among the higher secondary schoolstudents for the total sample and for the relevant sub samples..
4. There exists a significant relationship between the correlates of achievement motivation and achievement in Biology among thehigher secondary schoolstudents for the total sample and for the relevant sub samples.

2. The effect of the select correlates of achievement motivation on achievement in Biology is not significant among the higher secondary school students.

METHODOLOGY IN BRIEF

The Investigator adopts normative survey method. Considering the nature of study stratified random sampling technique was employed for the selection of sample. The sample for the study consist of 740 Higher Secondary (+2) science students. Among the total sample 282 were boys & 458 girls, 277 were residing at urban & 463 rural and 297 studying in Government, 278 Aided & 165 Unaided schools. The entire sample was collected from six districts of Kerala.

The tools used for the purpose of collection of data were 1) Examination Anxiety Scale, 2) Study Habits Inventory, 3) Academic Self-conceptScale, 4) Home Learning Environment Inventory and 5) Achievement test in Biology. All the five tools were prepared and standardized by the investigator with the help of the supervising teacher.

The data collected were consolidated, codified suitably and subjected to analysis. For this the investigator tabulated the collected data and used appropriate statistical techniques such as Karl Pearson's product moment coefficient of correlation, Partial correlation, t-test and Analysis of Variance.

SCOPE AND LIMITATIONS OF THE STUDY

The present study is intended to find out the level, relationship and effect of the identified correlates of Achievement motivation such as the Examination anxiety, Study habits, Self-concept and Home learning environment of higher secondary students on the Academic achievement in Biology on the whole sample and relevant sub samples. It is expected that the findings from this study may help the parents, teachers and administrators and all those who are concerned with education to realize the importance of achievement motivation in academic pursuit of the higher secondary students. The investigator further believes thatthe results of the study will be useful to have a better understanding among the educationalists for the formulation, execution and evaluation of different learning strategies atHigher Secondary level.

Even though all possible precautions were taken to get valuable and reliable results, the study has some limitations for taking all psychological aspects that related to Achievement motivation. The accurate estimation of Achievement motivation is possible only under certain drastic conditions. The investigator took only the various correlates of Achievement motivation. Due to lack of suitable measures, the investigator took only four

correlates of achievement motivation; Examination anxiety, Study habits, Self-concept and Home learning environment and it is the delimitation of the study.

The study was limited to Higher Secondary schools from the six districts of Kerala, and the students below the higher secondary levels have not been selected for the study.

The investigator has to rely upon the information received from the sample. The sample may have certain underlying unidentified characteristics which may influence their responses.

MAJOR FINDINGS AND CONCLUSIONS OF THE STUDY

1. CONCLUSION BASED ON THE FIRST OBJECTIVE

A.Level of examination anxiety

For the total sample

While comparing the level of Examination anxiety, it was found that the number of students in Average group is higher than that of the High and Low groups. It is also found that the number of students at the Low group is more than the High group affecting with the Examination anxiety.

The above conclusion is based on the following findings.

Out of the total sample, 101 (13.64%)have high level of examination anxiety,529 (71.48%)have average and 110 (14.86%)have low examination anxiety. Mean value of the total sample is 104.32 and standard deviation is 14.883.

For the sub samples

a) The mean scores of the examination anxiety of Boys and Girls differ significantly at both .01 and .05 levels.

   The mean scores of the examination anxiety of Boys (98.87) and Girls (107.68) and Standard Deviation were of 15.298 and 13.589 respectively. The critical ratio of the mean scores of examination anxiety of Boys and Girls (CR= 8.155, $p<.01$) shows that girls have high examination anxiety than boys.

b) The mean scores of the examination anxiety of Urban and Rural differ significantly at both .01 and .05 levels.

   The mean scores of the examination anxiety of Urban (102.38) and Ruralstudents (105.48) and Standard Deviation were of 14.666 and 14.906 respectively. The critical ratio of the mean scores of examination anxiety of Urban and Rural students (CR= 2.753, $p<.01$) shows that Rural Students have high examination anxiety than Urban.

c) The mean scores of the examination anxiety of Government, Aided and Unaided school studentsdo not differ significantly.

The mean scores of the examination anxiety of Government andAided and Unaided school students were 105.57, 103.81, and 102.93 respectively.

It was found that there is no significant difference with respect to type of management(F=1.928, p>.05).

B. Level of Study habits

For the total sample

While comparing the level of Study habits, it was found that the number of students in Average group is higher than that of the High and Low groups. It is also found that the number of students at the Low group is more than the High group affecting with the Study habits.

The above conclusion is based on the following findings.

Out of the total sample, 132 (17.8%) have high level of Study habits, 487 (65.8%) have average and 121 (16.35%) have low Study habits. Mean value of the total sample is 24.14 and standard deviation is 4.84.

For the sub samples

a) The mean scores of the Study habits of Boys and Girls differ significantly at both .01 and .05 levels.

The mean scores of the Study habits of Boys (22.87) and Girls (24.93) and Standard Deviation were of 5.167 and 4.463 respectively. The critical ratio of the mean scores of Study habits of Boys and Girls (CR= 5.757, p<.01) shows that girls have good Study habits than boys.

b) The mean scores of the Study habits of Urban and Rural differ significantly at both .01 and .05 levels.

The mean scores of the Study habits of Urban (24.74) and Rural students (23.79) and Standard Deviation were of 5.2 and 4.59 respectively. The critical ratio of the mean scores of Study habits of Urban and Rural students (CR= 2.58, p<.01) shows that Urban Students have good Study habits than Rural.

c) The mean scores of the Study habits of Government, Aided and Unaided school students differ significantly at both .01 and .05 levels.

The mean scores of the Study habits of Government (24.22) and Aided (24.97) and Unaided (22.63) school students. It was found that there issignificant difference between Government, Aided and Unaided (F=12.476, p <.01). When we analyzing the values very objectively,itwas

found that Government and Aided has no significant difference in their Study habits. In case of Government and Unaided, Aided and Unaided the mean of study habits differ significantly. The obtained value of Scheffe's post hoc analysis was 0.752, 1.585 and 2.337 respectively.

C. Level of Self concept

For the total sample

While comparing the level of Self-concept, it was found that the number of students in Average group is higher than that of the High and Low groups. It is also found that the number of students at the Low group is more than the High group affecting with the Self-concept.

The above conclusion is based on the following findings.

Out of the total sample, 118 (15.94%) have high level of Self-concept, 498 (67.29%) have average and 124 (16.75%) have low Self-concept. Mean value of the total sample is 74.15 and standard deviation is 8.747.

For the sub samples

a) The mean scores of the Self-concept of Boys and Girls differ significantly at both .01 and .05 levels.

The mean scores of the Self-concept of Boys (72.90) and Girls (74.91) and Standard Deviation were of 8.810 and 8.629 respectively. The critical ratio of the mean scores of Self-concept of Boys and Girls (CR= 3.056, $p<.01$) shows that girls have strong Self-concept than boys.

b) The mean scores of the Self-concept of Urban and Rural differ significantly at .05 level.

The mean scores of the Self-concept of Urban (75.03) and Rural students (73.62) and Standard Deviation were of 8.33 and 8.955 respectively. The critical ratio of the mean scores of Self-concept of Urban and Rural students (CR= 2.120, $p<.05$) shows that Urban Students have strong Self-concept than Rural.

c) The mean scores of the Self-concept of Government, Aided and Unaided school students not much differ significantly at both .01 and .05 levels.

The mean scores of the Self-concept of Government (73.99) and Aided (74.71) and Unaided (73.47) school students. It was found that there is no significant difference between Government, Aided and Un- Aided ($F=1.119$, $p >.05$) with respect to Self-concept of Higher Secondary school students.

D. Level of Home learning environment

For the total sample

While comparing the level of Home Learning Environment, it was found that the number of students in Average group is higher than that of the High and Low groups. It is also found that the number of students at the Low group is less than the High group affecting with the Home Learning Environment.

The above conclusion is based on the following findings.

Out of the total sample, 157(21.21%) have high level of Home Learning Environment, 489 (66.08%) have average and 94 (12.7%) have low Home Learning Environment. Mean value of the total sample is 26.11 and standard deviation is 4.930.

For the sub samples

a) The mean scores of the Home Learning Environment of Boys and Girls differ significantly at both .01 and .05 levels.

   The mean scores of the Home Learning Environment of Boys (24.58) and Girls (27.06) and Standard Deviation were of 5.047 and 4.616 respectively. The critical ratio of the mean scores of Home Learning Environment of Boys and Girls (CR= 6.834, $p<.01$) shows that girls have more Home Learning Environment than boys.

b) The mean scores of the Home Learning Environment of Urban and Rural differ significantly at both .01 and .05 levels.

   The mean scores of the Home Learning Environment of Urban (27.05) and Rural students (25.55) and Standard Deviation were of 5.106 and 4.739 respectively. The critical ratio of the mean scores of Home Learning Environment of Urban and Rural students (CR= 4.056, $p<.01$) shows that Urban Students have more Home Learning Environment than Rural.

c) The mean scores of the Home Learning Environment of Government, Aided and Unaided school students differ significantly at .05 level.

The mean scores of the Home Learning Environment of Government (26.61) and Aided (26.44) and Unaided (24.67) school students. It was found that there is significant difference between Government, Aided and Unaided ($F=9.443$, $p <.01$). When we analyzing the values very objectively, it was found that Government and Aided has no significant difference in their Home Learning Environment. In the case of Government and Unaided, Aided and

Unaided the means of Home Learning Environmentdiffer significantly.The obtained value of Scheffe's post hoc analysis was .174, 1.946 and 1.772 respectively.

E. Level of academic achievement in Biology

For the total sample

While comparing the level of academic achievement in Biology, it was found that the number of students in Average group is higher than that of the High and Low groups. It is also found that the number of students at the Low group is less than the High group affecting with the academic achievement in Biology.

The above conclusion is based on the following findings.

Out of the total sample, 165(22.29%) have high level of academic achievement in Biology, 421(56.89%) have average and 154 (20.81%) have low academic achievement in Biology. Mean value of the total sample is 21.89 and standard deviation is 5.782.

For the sub samples

a) The mean scores of the academic achievement in Biology of Boys and Girls differ significantly at both .01 and .05 levels.

   The mean scores of the academic achievement in Biology of Boys (20.01) and Girls (23.05) and Standard Deviation were of 6.306 and 5.108 respectively. The critical ratio of the mean scores of academic achievement in Biologyof Boys and Girls (CR= 7.176, p<.01) shows that girls have moreacademic achievement in Biology than boys.

b) The mean scores of the academic achievement in Biology of Urban and Rural differ significantly at both .01 and .05 levels.

   The mean scores of the academic achievement in Biology of Urban (22.89) and Rural students (21.29) and Standard Deviation were of 5.836 and 5.673 respectively. The critical ratio of the mean scores of academic achievement in Biology of Urban and Rural students (CR= 3.670, p<.01) shows that Urban Students have moreacademic achievement in Biology than Rural.

c) The mean scores of the academic achievement in Biology of Government, Aided and Unaided school students differ significantly at both .01 and .05 levels.

   The mean scores of the academic achievement in Biology of Government (21.78) and Aided (23.24) and Unaided (19.81) school students. It was found that there is significant difference between Government, Aided and Unaided (F=19.218, p <.01).

When we analyzing the values very objectively, it was found that Government and Aided has no significant difference in their academic achievement in Biology. In the case of Government and Unaided, Aided and Unaided the means of academic achievement in Biology differ significantly.. The obtained value of Scheffe's post hoc analysis was 1.456, 1.975and 3.431 respectively.

2. CONCLUSION BASED ON THE SECOND OBJECTIVE

Relationship between Examination Anxiety and Achievement in Biology
For the total sample

While comparing the relationship between Examination Anxiety and achievement in Biology, it was found that there is negligible positive relationship. The correlation(r = 0.109, t –value = 2.9788) obtained is significant at both .01 and.05 levels.

For the sub samples

a) The relationship between Examination Anxiety and achievement in Biology is negligible in Boys (r=0.001) and negligible in Girls (r=0.070) among the higher secondary students. The relationship is not significant at both .01 and .05 levels for Boys and Girls.
b) The relationship between Examination Anxiety and achievement in Biology is negligible in Urban (r=0.036) and negligible in Rural (r=0.177) among the higher secondary students. The relationship is significant at both.01 and .05 levels for Urban and Rural.
c) The relationship between Examination Anxiety and achievement in Biology is negligible order as for the Government (r=0.132), Aided (r=0.133) and Unaided (r=0.039) higher secondary schools. But the relationship is significant at both levels for the Government, Aided and Unaided schools.

Relationship between Study habits and Achievement in Biology

For the total sample

While comparing the relationship between study habits and achievement in Biology, itwas found that there is substantial positiverelationship. The correlation(r = 0.656, t –value = 23.6114) obtained is significant at both .05 and .01levels.

For the sub samples

a) The relationship between study habits and achievement in Biology is high in Boys (r=0.724) and moderate in Girls (r=0.563) among the higher secondary students. The relationship is significant at both.01 and .05 levels for Boys and Girls.
b) The relationship between study habits and achievement in Biology is high in Urban (r=0.706) and moderate in Rural (r=0.617) among the higher secondary students. The relationship is significant at both.01 and .05 levels for Urban and Rural.
c) The relationship between study habits and achievement in Biology is highorder as for the Government (r=0.657) and Aided (r=0.744) schools are concerned but in the case of Unaided (r=0.494) higher secondary schools the relationship is moderate. But the relationship is significant at both levels for the Government, Aided and Unaided schools.

Relationship between self-concept and achievement in Biology
For the total sample

While comparing the relationship between self-concept and achievement in Biology, it was found that there is negligible positive relationship. The correlation(r = 0.469, t –value = 14.4258) obtained is significant at both .01 and.05 levels.

For the sub samples

a) The relationship between self-concept and achievement in Biology is moderate in Boys (r=0.509) and moderate in Girls (r=0.422) among the higher secondary students. The relationship is significant at both .01 and .05 levels for Boys and Girls.
b) The relationship between self-concept and achievement in Biology is moderate in Urban (r=0.476) and moderate in Rural (r=0.458) among the higher secondary students. The relationship is not significant at both.01 and .05 levels for Urban and Rural.
c) The relationship between self-concept and achievement in Biology is moderate order as for the Government (r=0.435), Aided (r=0.526) and Unaided (r=0.444) higher secondary schools. But the relationship is significant at both levels for the Government, Aided and Unaided schools.

Relationship between Home learning environment and achievement in Biology.
For the total sample

While comparing the relationship between Home learning environment and achievement in Biology, it was found that there is high positive relationship. The correlation(r = 0.753, t –value = 31.0873) obtained is significant at both .01 and.05 levels.

For the sub samples

a) The relationship between Home learning environment and achievement in Biology is high in Boys (r=0.779) and high in Girls (r=0.704) among the higher secondary students. The relationship is significant at both .01 and .05 levels for Boys and Girls.

b) The relationship between Home learning environment and achievement in Biology is high in Urban (r=0.765) and high in Rural (r=0.737) among the higher secondary students. The relationship is significant at both.01 and .05 levels for Urban and Rural.

c) The relationship between Home learning environment and achievement in Biology is high order as for the Government (r=0.755), Aided (r=0.779) and Unaided (r=0.719) higher secondary schools. But the relationship is significant at both levels for the Government, Aided and Unaided schools.

Partial correlation between Examination anxiety and achievement in Biology
For the total sample

There is negligible negative relationship between Examination anxiety and Achievement in Biology (partial r=-0.014, t=0.379) with Study habits, Self-concept and Home learning environment partialled out and it is not significant at both levels.

For the sub samples

a) There is negligible negative relationship between Examination anxiety and Achievement in Biology for both Boys (-0.081) and Girls (-0.012), with Study habits, Self-concept and Home learning environment partialled outand it is not significant at both .01 and .05levels.

b) There is a negligible negative relationship between Examination anxiety and Achievement in Biology for the Urban students (-0.0447), but for Rural students(0.009) the relationship is negligible with Study habits, Self-concept and Home learning environment partialled out and it is not significant at both levels.

c) The relationship is negligible and negative for Government schools (-0.064), only negligible for Aided schools (0.101) and negligible negative for Unaided schools (-

0.060) with Study habits, Self-concept and Home learning environment partialled out. This is not significant at both .01 and .05levels.

Partial correlation between Study habits and Achievement in Biology
For the total sample

There is a low correlation between Study habits and Achievement in Biology (partial r=0.264, t= 7.42) with Self-concept, Home learning environment and Examination anxiety partialled out. The relationship is significant at .01 and .05 levels.

For the sub samples

a) There is a low correlation for Boys (0.336) and negligible relationship for Girls (0.194), between the Study habits and Acheivement in Biology with Self-concept, Home learning environment and Examination anxiety partialled out. The relationship is significant at.01 and .05 level.
b) There is a low correlation between Study habits and Achievement in Biology for both Urban (0.346) and Rural (0.215) students with Self-concept, Home learning environment and Examination anxiety partialled out. The relationship is significant at both levels.
c) There is a low level relationship exists between Study habits and Achievement in Biology for the Government (0.274) and Aided Schools (0.376) but the relationship is negligible in the case of Unaided Schools (0.106), with Self-concept, Home learning environment and Examination anxiety partialled out. The relationship is significant at .01 levels for Government and Aided schools but it is not significant, at any of the levels for the Unaided schools.

Partial correlation between Self-concept and Achievement in Biology
For the total sample

There is a negligible relationship between Self-concept and Achievement in Biology (partial r= 0.106, t= 2.890) with Home learning environment, Examination anxiety and Study habits partialled out. The relationship is significant only at.05 level.

For the sub samples

a) There is a negligible relationship between Self-concept and Achievement in Biology for both Boys (0.161) and Girls (0.093) with Home learning environment,

Examination anxiety and Study habits partialled out. The relationship is significant only at .05 level.

b) There is a negligible relationship between Self-concept and Achievement in Biology for both Urban (0.022) and Rural (0.144)students with Home learning environment, Examination anxiety and Study habits partialled out. The relationship is not significant at any of the levels in urban students but it significant only at .05 levels in rural students.

c) There exists a negligible relationship between Self-concept and Achievement in Biology for Government (-0.034) and Aided schools (0.113) but it is a low level relationship for the Unaided schools (0.260), with Home learning environment, Examination anxiety and Study habits partialled out. The relationship is not significant at any of the levels for the Government and Aided Schools but it is significant only at .05levels for the Unaided schools.

Partial correlation between Home learning environment and Achievement in Biology.
For the total sample

There is a moderate relationship between Home learning environment and Achievement in Biology (partial r=0.529, t = 16.89) withSelf-concept, Examination anxiety and Study habits partialled out. The relationship is significant at .01 and .05levels.

For the sub samples

a) There is a moderate relationship between Home learning environment and Achievement in Biology for both Boys (0.497) and Girls (0.528), with Self-concept, Examination anxiety and Study habits partialled out. The relationship is significant at .01 and .05levels.

b) There is a moderate relationship between Home learning environment and Achievement in Biology for both the Urban (0.518) and Rural students (0.531) with Self-concept, Examination anxiety and Study habits partialled out. The relationship is significant at .01 and .05 levels.

c) There is a moderate relationship between Home learning environment and Achievement in Biology for the Government (0.535), Aided (0.511) and Unaided School (0.587) students with Self-concept, Examination anxiety and Study habits partialled out. The relationship is significant at .01 and .05 levels.

3. CONCLUSION BASED ON THE THIRD OBJECTIVE

Effect of Examination anxiety on Achievement in Biology

The effect of Examination anxiety on Achievement in Biology (F value=4.537) is significant among the three groups of students based on the level of Examination anxiety and it is significant at .05 level.

Further, while conducting the group's comparison; significant differences exist only in high-low and average-low groups at .05 level.

Effect of Study habits on Achievement in Biology

The effect of Study habits on Achievement in Biology (F = 216.377)is significant among the three groups of the students based on the level of study habits and it is significant at .01 level.

Further, while conducting the group's comparison; significant differences exist in all the paired groups and it is significant at .05 level.

Effect of Self-concept on Achievement in Biology

The effect of Self-concept on Achievement in Biology (F = 71.033) is significant among the three groups of the students based on the level of self-concept and it is significant at .01 level.

Further, while conducting the group's comparison; significant differences exist in all the paired groups and it is significant at .05 level.

Effect of Home learning environment on Achievement in Biology

The effect of Home learning environment on Achievement in Biology(F =283.200) is significant among the three groups of the students based on the level of Home learning environment and it is significant at .01 level.

Further, while conducting the group comparison, significant differences exists in all the three paired groups (High- Average, High- Low and Low-Average) and it is significant at .05 levels.

TENABILITY OF HYPOTHESES

The first Hypothesis states that there is no significant difference in the level of the correlates of achievement motivation and the level of achievement in Biology of the higher secondary students.

The correlates of achievement motivation are the study habits, examination anxiety, self-concept and Home learning environment.

Mean study habits of the higher secondary students vary significantly with respect to gender, locale and management of the institution.

Mean examination anxiety of the higher secondary students varies significantly with respect to gender and locale of the institution but no significant difference in the type of management of the institution.

Mean self-concept of the higher secondary students varies significantly with respect to gender and locale of the institution but the variation is insignificant with respect to the management of the institution.

Mean Home learning environment of the higher secondary students varies significantly with respect to gender, locale of the institution and management of the institutions.

Mean Biology achievement of the higher secondary students varies significantly with respect to gender, locale and management of the institution.

So the first Hypothesis is not substantiated.

The second Hypothesis states that there exists a significant relationship between the correlates of achievement motivation and achievement in Biology among the students at higher secondary level.

From the values of coefficient of correlation it can be interpreted that the relationship between study habits and achievement in Biology is significant for the total sample and for the sub samples.

From the values of coefficient of correlation it can be interpreted that the relationship between examination anxiety and achievement in Biology is significant for the total sample.

The relationship of examination anxiety and achievement in Biology is not significant in the case of the gender and locale of the institutions. The relationship is partially significant when the management of institutions is concerned.

From the values of coefficient of correlation it can be interpreted that the relationship between Self-concept and achievement in Biology is significant for the total sample and for the sub samples.

From the value of coefficient of correlation it can be interpreted that the relationship between home learning environment and achievement in Biology is significant for the total sample and for the sub samples.

From the value of coefficient of partial correlation it can be interpreted that the relationship between examination anxiety and achievement in Biology with study habits, self-concept and home learning environment partialled out is not significant for the total sample and for the sub samples.

From the values of coefficient of partial correlation it can be interpreted that the relationship between study habits and achievement in Biology with self-concept, home learning environment and examination anxiety partialled out is significant for the total sample. As far as the sub samples are concerned it is significant for the gender and locale of the institution, but in case of the management it is significant in two cases and not significant in one case.

From the value of coefficient of partial correlation it can be interpreted that the relationship between Self-concept and achievement in Biology with home learning environment, examination anxiety and study habits partialled out is significant for the total sample. As far as the sub samples are concerned it is significant in some cases and not significant in some other cases.

From the value of coefficient of partial correlation it can be interpreted that the relationship between home learning environment and achievement in Biology with self-concept, examination anxiety and study habits partialled out is significant for the total sample and for the sub samples.

So the second Hypothesis is not fully substantiated.

The third Hypothesis states that the effect of the select correlates of achievement motivation on achievement in Biology is not significant among the students at the higher secondary schools.

The analysis of variance of the correlates of achievement motivation on achievement in Biology proved that the effect is significant among the students at the higher secondary schools.

So the third Hypothesis is rejected.

IMPLICATIONS OF THE STUDY

This study is on the correlates of achievement motivation and academic achievement. The two vital concepts associated with the learning process; the concepts are normally directly proportionate in nature. Achievement motivation is a multidimensional character, where a fusion of psychological and sociological components can be seen. The correlates of achievement motivation like Study habits, Examination anxiety, Self-concept and Home

learning environments have had decisive influence upon the academic achievement. The study reveals this influence more precisely among the higher secondary students.

The study shows that the variables Study habits, Self-concept and Home learning environments are directly proportional to academic achievement whereas the variable Examination anxiety is reversely proportional to academic achievement. A student with good study habits, healthy and positive self-concept, proper and congenial home learning environment has higher level of academic achievement. In the case of Examination anxiety low level of academic achievement is the hall mark of the students with high level of examination anxiety.

Another observation from the study is that most of the students fall in the category of "average" as far as all the variables taken together. This means that our students at the higher secondary stage are average in their level of the correlates of achievement motivation. The future of the nation rests in the hands of these children. If they are average in their abilities and level of motivation, future of the country is not a promising one because human resources is the premier resource for a country like India. So we have to do a lot more for improving the threshold and potential of achievement motivation among our students. Then only we can reduce the time, the finance and other resources for the transformation of our country from the developing to that of a developed one.

At this juncture the investigator suggests the following implications on the light of the findings from the study.

- Development of a proper study habits is essential for better academic achievement. So a good study habits may cultivate from the earlier classes onwards.
- It is the responsibility of the parents to provide a hazel free domestic environment for learning to their wards.
- It may be the duty of the school authorities to provide ample opportunities for the parents to involve and to interact with the academic activities of their children.
- It is advisable to conduct motivational programs in the school with the help and cooperation of the local community.
- Examination anxiety reducing techniques may be practiced from smaller classes onwards.
- The home learning environments of the students are varying in character. It is the responsibility of the teachers to identify the deficit among the students and suggest appropriate compensatory measures to the concerned parents.

- The development of a healthy and positive self-concept is vital for the progress of the individual. This point may be kept in mind by the teacher in his dealings with the students, especially the late adolescent one.
- Understanding of one's own self is essential for the better academic achievement. Teachers create opportunities for the development of self-concept through academic and non-academic activities.

The policy makers of education consider the above mentioned observations in a positive frame of mind; definitely we have to create a new generation which have the urge and appetite for a better and bright future.

SUGGESTIONS FOR FURTHER STUDY

In the present study the investigator studied the effect and relationship of examination anxiety,study habits,self-concept and home learning environment; which are identified as the correlates of achievement motivation upon the achievement in Biology of the higher secondary students. As the study is limited to find out the effect of these variables on the higher secondary school students it will reveal the total picture of the present situation in the selected field of study. In this context the investigator proposes the following suggestions for further study.

1) The present study is conducted among the higher secondary school students. It can be studied in students at the other levels of Education.
2) The present study had selected students from six districts of Kerala. This study can be repeated on a state wide sample.
3) The study can be conducted in other disciplines of higher secondary level.
4) The present study can replicate into an experimental study by choosing the disadvantaged students as the experimental group.
5) A similar study about the effect of other components of achievement motivation on achievement can be conducted by using other independent variables such as level of aspiration, intelligence, and creativity.

The investigator desires to draw the attention of the educationists, the teachers and the parents about the importance of achievement motivation among the students in their late adolescents. In this blossoming agean individual has to develop many of the life skills to

harvest the best in his life. The efforts for this to a great extent depend on his level of achievement motivation.

The investigator hopefully believed that the findings of the present study inspires all thosefor evolving a teaching learning environment which recognizes the importance of achievement motivation in the academic achievement and also in the day to day living of an individual.